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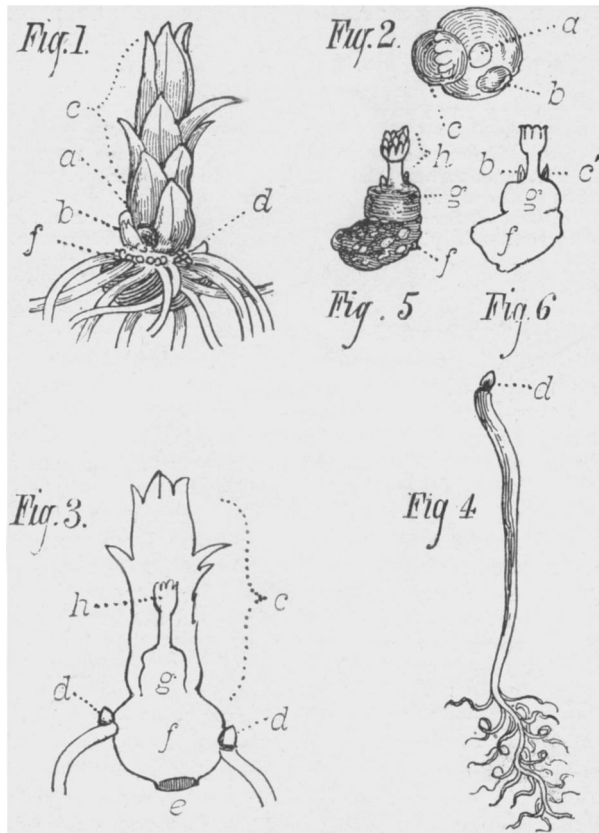
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The Development of *Dodecatheon*.—The development of our native plants has been so little studied that almost any of them is capable of presenting new facts. In *Dodecatheon Meadia*, L., I think I have found some new phases of development which are of sufficient interest to warrant my publishing them.

Taking the plant during the last days of March we find a tuberous, shortened root-stock, *f* (Fig. 1), bearing at its top two buds, one large and strong, *c*, the other small, *b*; between these is a scar, *a*, which indicates the position of last year's flower-stalk or scape. The smaller bud, *b*, contains only leaves, the large, prominent one, *c*, contains all the leaves and all the flowers of the coming spring. These were already evident in the fall, but they remained undeveloped during the winter in order to flower the coming spring. The root-stock, *f*, will perish after flowering this year, but the continuation of it, bearing the



leaves and flower-scape, *g*, of the season, will produce roots, and, at its summit, a continuation of its axils bearing the leaves and scape of next year. Thus it becomes evident that each growth of the root-

stock remains but two seasons, one while it bears leaves and flowers, and another while it serves as a reservoir in which to lay up a supply of food.

After the second year a constriction takes place between the effete biennial rootstock and the growth above it which at last results in their entire separation, leaving a scar at the point of attachment, *e*.

The peculiar feature of this plant, however, is this: The lower axils of the leaves in early spring contain leaf-buds, at the base of which in each case we find but one root, so that in this case the roots preserve the phyllotaxy of the leaves, since they agree with the position of the buds which are in the axils of the leaves. The roots of these leaf-buds, *d*, remain for one year attached to the parent plant and serve them as suppliers of sap. When, after the second year, this portion of the parent stem decays, the roots are separated from it, but carry with them the still quite undeveloped buds (Fig. 4), which are capable of forming a new plant. I know of no parallel case. The phyllotaxy is $\frac{1}{3}$, or occasionally $\frac{2}{3}$. I consider the scape as the end of the rootstock, the two buds being axillary, the upper one the larger. This would make it a case of sympodial growth.

EXPLANATION OF THE FIGURES.—Fig. 1. The plant in March. Fig. 2. Section showing the position of buds and last year's scape. Fig. 3. Longitudinal section. Fig. 4. The roots after separation. Fig. 5. Plant divested of scales and leaves. Fig. 6. Section of the last. *a*. Last year's scar. *b*. Small leaf-bud. *c*. Bud containing the scape. *b'* and *c'*. The same in the young shoot. *d*. Bud falling away with root. *e*. Scar left by the falling off of the portion of the root-stock more than two years old. *f*. Two years old. *g*. One year old portion. *h*. The scape.

Dayton, Ohio.

A. F. FOERSTE.

Notes from Southern New Jersey.—The following plants, collected in 1883, are not given in the Preliminary Catalogue of the State, and may therefore be worth noticing:

Chionanthus Virginica, L.—This is an addition to the flora of the State; locality, near Buena Vista Station, N. J., and Atlantic City R. R. Rare, but probably occurs more frequently in a locality called "Thick Hole," Cumberland Co.

On July 4th I collected in Stephen's Creek, near Estellville, Atlantic Co., *Potamogeton Oakesianus*, Robbins. I am not aware that this plant has been reported from New Jersey before.

Perhaps the only definitely known locality in the State for *Scleria reticularis*, Michx., is near Main Road Station, N. J. S. R. R., seemingly not very abundant.

C. A. GROSS.

Note on *Æcidium Bellidis*.—The *Æcidium* upon the common daisy, which has hitherto been regarded as a spore-form of *Puccinia Compositarum*, is a true heterocismal uredine. A series of experimental cultures which I have made during the past four months has demonstrated the fact that *Æcidium Bellidis* is one stage of *Puccinia obscura*, Schröt., which occurs on *Luzula*. The *P. Luzulae* Lib., is a totally distinct species having smooth, elliptical uredospores. Those of *P. obscura* are round and rough.

King's Lynn, England.

CHARLES B. PLOWRIGHT.